

**What is claimed is:**

1. A photoimageable dielectric epoxy resin system film comprising:
  - a. from about 5 to 80% of phenoxy polyol resin which is the condensation  
5 product of epichlorohydrin and bisphenol A, having a molecular weight of from about 40,000 to 130,000;
  - b. from about 0 to 90% of an epoxidized multifunctional bisphenol A formaldehyde novolac resin having a molecular weight of from about 4,000 to 10,000;
  - c. from 20% to 50% of a diglycidyl ether of bisphenol A having a  
10 molecular weight of from about 600 to 2,500;
  - d. less than 15% of a cationic photoinitiator;
  - e. from about 15% to about 35% liquid epoxy resin, having a molecular weight of from about 200 to about 600; and
  - f. from 0% to about 30% of a rheology modifier, and less than about  
15 3% solvent.
2. The film of claim 1 wherein the epoxy resin system comprises:
  - from 10% to 40% of phenoxy polyol resin having a molecular weight of  
from about 60,000 to 90,000;
  - from about 12% to 30% of an epoxidized multifunctional bisphenol A  
20 formaldehyde novolac resin having a molecular weight of from about 5,000 to 7,000;
  - from about 25% to 40% of said diglycidyl ether of bisphenol A having a molecular weight of from about 1,000 to 1,700 wherein said diglycidyl ether bisphenol A is brominated; and

from about 15% to about 30% liquid epoxy resin, having a molecular weight of from about 250 to about 400.

3. The film of claim 1, wherein the epoxy resin comprises:  
5 from 15% to about 30% of the phenoxy polyol resin;  
from about 15% to about 20% of the epoxidized multifunctional bisphenol A formaldehyde novolac resin;  
from about 27% to about 35% of the diglycidyl ether of bisphenol A; and  
from about 20% to about 30% of the liquid epoxy resin  
10 wherein the rheology modifier is silica and there is less than about 2% of the solvent.

4. The film of claim 3, wherein:  
the phenoxy polyol resin has an epoxy value of about 0.03 equivalents per  
15 kg, a weight per epoxide of about 37,000 and a glass transition temperature of about 98°C;

the epoxidized multifunctional bisphenol A formaldehyde novolac resin has an epoxy value of about 4.7 equivalents per kilogram, as weight per epoxide of about 215 and a melting point of about 82°C;

20 the diglycidyl ether of bisphenol A has an epoxy value of about 1.5 equivalents per kilogram, a weight per epoxide of about 675 and a melting point of about 97°C; and

about 5 parts by weight of the resin weight complex triarylsulfonium hexafluoroantimonate salt photoinitiator.

5. The film of claim 1, wherein the epoxy resin comprises:  
from about 10% to 40% of phenoxy polyol resin which is the condensation  
product of epichlorohydrin and bisphenol A, having a molecular weight of from about  
40,000 to 130,000;  
5 from 25% to 40% of the diglycidyl ether of bisphenol A having a  
molecular weight of from about 600 to 2,500;  
from about 15% to about 32% liquid epoxy resin, having a molecular  
weight of from about 200 to about 600.

10 6. The film of claim 1, wherein the epoxy resin comprises:  
from about 15% to 30% of phenoxy polyol resin which is the condensation  
product of epichlorohydrin and bisphenol A, having a molecular weight of from about  
40,000 to 130,000;  
from 27% to 35% of the diglycidyl ether of bisphenol A having a  
15 molecular weight of from about 600 to 2,500; and  
from about 20% to about 30% liquid epoxy resin, having a molecular  
weight of from about 200 to about 600;  
wherein the rheology modifier is silica and there is less than about 2% of  
the solvent.

7. The film of claim 6, wherein said photoimageable dielectric film lacks an epoxidized multifunctional bisphenol A formaldehyde novolac resin.